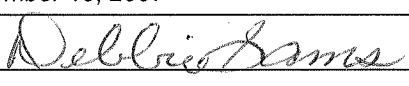
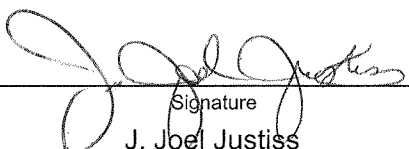


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PTO/SB/33 (07-05)

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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)			
<p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]</p> <p>on <u>September 13, 2007</u></p> <p>Signature <u></u></p> <p>Typed or printed name <u>Debbie Sams</u></p>		Application Number	Filed		
		10/755,603	January 12, 2004		
		First Named Inventor			
		Srinath Hosur			
		Art Unit	Examiner		
		2618	Dominic E. Rego		
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. <u>48,981</u> Registration number</p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>				<p> Signature</p> <p><u>J. Joel Justiss</u> Typed or printed name</p> <p><u>972-480-8800</u> Telephone number</p> <p><u>September 13, 2007</u> Date</p>	
<p><input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.</p>					

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Srinath Hosur, *et al.*  
Serial No.: 10/755,603  
Filed: January 12, 2004  
Title: TIME-SWITCHED PREAMBLE GENERATOR, METHOD OF  
GENERATING AND MULTIPLE-INPUT, MULTIPLE-OUTPUT  
COMMUNICATION SYSTEM EMPLOYING THE GENERATOR  
AND METHOD  
Grp./A.U.: 2618  
Examiner: Dominic E. Rego Confirmation No.: 9552

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being electronically filed  
with United States Patent and trademark Office on:  
September 13, 2007 (Date)  
Debbie Sams  
(Printed or typed name of person signing the certificate)  
/Debbie Sams/  
(Signature of the person signing the certificate)

Sir:

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

The Appellants have carefully considered this application in connection with the Examiner's  
Final Rejection electronically delivered July 13, 2007, and respectfully request a pre-appeal brief  
review of this application in view of the following remarks.

## **REMARKS/ARGUMENTS**

The Appellants originally submitted Claims 1-24 in the application. Previously, the Appellants amended Claims 1-3, 5-6, 9-11, 13-14, 17-19, and 21-22. Accordingly, Claims 1-24 are currently pending in the application.

### **I. Rejection of Claims 1-3, 5, 6, 9-11, 13, 14, 17-19, 21 and 22 under 35 U.S.C. §112**

The Examiner has rejected Claims 1-3, 5, 6, 9-11, 13, 14, 17-19, 21 and 22 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement and, furthermore, the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. More specifically, the Examiner asserts that, regarding Claims 1, 9, and 17, there is no mention of "wherein at least one of said first preamble and said second preamble employs a complete or an undivided training sequence," and, further, regarding Claims 2-3, 5-6, 10-11, 18-19, and 21-22, there is no mention of "complete or undivided training sequence." (See Final Rejection electronically delivered July 13, 2007, page 2.) The Appellants respectfully disagree.

35 U.S.C. §112, first paragraph, states that the "specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same ... ." As noted in the MPEP, the subject matter of the claim need not be described literally (*i.e.*, using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement. (See MPEP §2163.02.) Additionally, the MPEP states that to comply with the written description requirement of 35 U.S.C. §112, paragraph 1, each claim limitation must be expressly, implicitly, or inherently supported in the originally filed disclosure. (See MPEP §2163 (II)(A)(3)(b).)

As stated in the original specification:

In one embodiment of the present invention, a training sequence (*i.e.*, and IEEE 802.11(a) long sequence) is employed as the first preamble to the first transmit antenna T1, and a null is employed as the second preamble to the second transmit antenna T2, wherein the preambles occur during the initial time interval. Then, the first and second preambles are interchanged between the first and second transmit antennas T1, T2 for concurrent transmission during the subsequent time interval. (See paragraph 26.)

In an alternative embodiment, the first preamble to the first transmit antenna T1 employs a first training sequence and the second preamble employs a second training sequence that is orthogonal to the first training sequence. (See paragraph 27.)

Thus, as noted in the original specification, a training sequence that is employed for the first preamble to the first transmit antenna is a complete and undivided training sequence while a null is employed as a second preamble for a second antenna. Additionally, in the alternative embodiment, a complete and undivided first training sequence is employed in a first preamble for a first antenna while a separate second complete and undivided training sequence, orthogonal to the first training sequence, is employed in a second preamble for a second antenna. In both embodiments, the first and second preambles employ complete and undivided training sequences transmitted on first and second antennas, respectively, during a first time interval and are then interchanged for the second time interval. As such, the training sequences described in the original specification, as noted above, are complete and undivided training sequences.

Since the above-mentioned claims include subject matter is described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, these claims comply with the requirements of 35 U.S.C. §112, first paragraph. Accordingly, the Appellants respectfully request the Examiner to withdraw the §112 rejection of Claims 1-3, 5, 6, 9-11, 13, 14, 17-19, 21 and 22 and allow issuance thereof.

## **II. Rejection of Claims 1-3, 7-11, and 15-16 under 35 U.S.C. §103**

The Examiner has rejected Claims 1-3, 7-11, and 15-16 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0136464 by Suh, *et al.* The Appellants respectfully disagree since Suh does not teach or suggest further providing a second preamble to a first transmit antenna and a first preamble to a second antenna during a subsequent time interval, wherein at least one of a first preamble and second preamble employs a complete training sequence as recited in independent Claims 1 and 9.

The Examiner cites paragraphs 62-70 of Suh to teach wherein at least one of a first preamble and a second preamble employs a complete training sequence. (*See* Final Rejection, page 4.) Assuming *arguendo* this to be true, Suh does not teach or suggest that a first or second preamble is further provided to a first or second antenna during a subsequent time period. Suh teaches that in a two transmission antenna OFDM communication system, the preamble sequence generator generates one of three different preamble sequences, S(-100:100), P(-100:100), and Pg(-100:100). Assuming *arguendo* long preamble sequence S(-100:100) is a complete training sequence, Suh teaches mapping sequence S(-100:100) in the long preamble sequence period to corresponding subcarriers on the IFFT processor's input terminal and then ending the procedure. (*See*, for example, paragraphs 62-70, 101-102, and 105-107, Step 717 in Figure 7, Step 817 in Figure 8.) Thus, Suh

teaches a training sequence is provided to a first and second antenna concurrently and then ends the procedure. Suh does not teach or suggest a training sequence is provided to a first antenna in one time period and then to a second in a subsequent time period as recited in independent Claims 1 and 9.

Suh also teaches a preamble sequence generator can generate a short preamble sequence of an even subcarrier, P(-100:100), and a short preamble sequence of an odd subcarrier, Pg(-100:100). These short preamble sequences are applied to antenna #0 and antenna #1, respectively. (*See*, for example, paragraphs 65-66, 68-69, 103, and 108, and Figures 7 and 8.) Here Suh teaches that a portion of a preamble sequence, for either even or odd subcarriers, is transmitted on a first or second antenna. As such, Suh does not teach or suggest wherein at least one of a first preamble and a second preamble employs a complete training sequence as recited in independent Claims 1 and 9.

For at least these reasons, Suh does not establish a *prima facie* case of obviousness for independent Claims 1 and 9 and Claims that depend thereon. Accordingly, the Appellants respectfully request the Review Panel to remove the §103(a) rejection of Claims 1-3, 7-11, and 15-16 and allow issuance thereof.

### **III. Rejection of Claim 4 and 12 under 35 U.S.C. §103**

The Examiner has rejected Claims 4 and 12 under 35 U.S.C. §103(a) as being unpatentable over Suh in view of U.S. Patent Application Publication No. 2002/0057750 by Nakao, *et al.* As established above, Suh does not establish a *prima facie* case of obviousness of independent Claims 1 and 9. Nakao has not been cited to cure the deficiencies of Suh but to teach the subject matter dependent Claims 4 and 12. (*See* Final Rejection, page 5.) As such, the cited combination of Suh and Nakao does not establish a *prima facie* case of obviousness of independent Claims 1 and 9 and Claims that depend thereon. Accordingly, the Appellants respectfully request the Review Panel to remove the §103(a) rejection of Claims 4 and 12 and allow issuance thereof.

### **IV. Rejection of Claims 5-6, 13-14, 17-19, and 21-24 under 35 U.S.C. §103**

The Examiner has rejected Claims 5-6, 13-14, 17-19, and 21-24 under 35 U.S.C. §103(a) as being unpatentable over Suh in view of U.S. Patent No. 7,110,350 to Li, *et al.* As established above, Suh does not establish a *prima facie* case of obviousness of independent Claims 1 and 9. Analogously, Suh does not establish a *prima facie* case of obviousness of independent Claim 17. Li has not been cited to cure the deficiencies of Suh but to teach the subject matter of dependent Claims 5-6, 13-14, and 21-22 and to teach the first and second receiver of independent Claim 17. (*See* Final Rejection, pages 6 and 8.) As such, the cited

combination of Suh and Li does not establish a *prima facie* case of obviousness of independent Claims 1, 9, and 17 and Claims that depend thereon. Accordingly, the Appellants respectfully request the Review Panel to remove the §103(a) rejection of Claims 5-6, 13-14, 17-19, and 21-24 and allow issuance thereof.

**V. Rejection of Claim 20 under 35 U.S.C. §103**

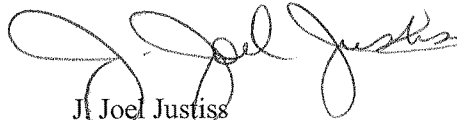
The Examiner has rejected Claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Suh in view of Li and Nakao. As established above, the cited combination of Suh and Li does not establish a *prima facie* case of obviousness of independent Claim 17. Nakao has not been cited to cure the deficiencies of the cited combination but to teach the subject matter of Claim 20. (See Final Rejection, page 5.) As such, the cited combination of Suh, Li, and Nakao does not establish a *prima facie* case of obviousness of independent Claim 17 and Claims that depend thereon. Accordingly, the Appellants respectfully request the Review Panel to remove the §103(a) rejection of Claim 20 and allow issuance thereof.

**VI. Conclusion**

In view of the foregoing remarks, the Appellants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-24. The Appellants request the Reviewers to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 20-0668.

Respectfully submitted,

HITT GAINES, PC

  
J. Joel Justiss  
Registration No. 48,981

Dated: September 13, 2007

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